



TENNESSEE DEPARTMENT OF

EDUCATION
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Medical Therapeutics

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| Primary Career Cluster: | Health Science |
| Consultant: | Amy F. Howell, (615) 532-2839, Amy.F.Howell@tn.gov |
| Course Code(s): | 5999 |
| Prerequisite(s): | <i>Health Science Education</i> (5998) |
| Credit: | 1 |
| Grade Level: | 10-11 |
| Graduation Requirements: | This course satisfies one of three credits required for an elective focus when taken in conjunction with other Health Science courses. |
| Programs of Study and Sequence: | This is the second course in both the <i>Therapeutic Nursing Services</i> and <i>Therapeutic Clinical Services</i> programs of study. |
| Aligned Student Organization(s): | HOSA: http://www.tennesseehosa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov |
| Coordinating Work-Based Learning: | Teachers are encouraged to use embedded WBL activities such as informational interviewing, job shadowing, and career mentoring. For information, visit http://tn.gov/education/cte/work_based_learning.shtml . |
| Available Student Industry Certifications: | None |
| Dual Credit or Dual Enrollment Opportunities: | There are no statewide dual credit/dual enrollment opportunities for this course. If interested in establishing a local opportunity, reach out to your local postsecondary institution. |
| Teacher Endorsement(s): | 577, 720 |
| Required Teacher Certifications/Training: | None |
| Teacher Resources: | http://www.tn.gov/education/cte/HealthScience.shtml |

Course Description

Medical Therapeutics is an applied course designed to prepare students to pursue careers in therapeutic services. Upon completion of this course, a proficient student will be able to identify careers in therapeutics services; assess, monitor, evaluate, and report patient/client health status; and identify the purpose and components of treatments. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects, Partnership for 21st Century Skills Framework for 21st Century Learning, as well as Tennessee Anatomy and Physiology standards.*

Program of Study Application

This is the second course in the *Therapeutic Nursing Services* and *Therapeutic Clinical Services* programs of study. For more information on the benefits and requirements of implementing these programs in full, please visit the Health Science website at <http://www.tn.gov/education/cte/HealthScience.shtml>.

Course Standards

Career Planning and Compliance

- 1) Research careers within the therapeutic field, and document educational requirements as well as state and national guidelines governing practicing professionals (such as licensing, certifications, training, compliance). Identify potential training programs, schools, and examinations appropriate to obtain required credentials for a specific occupation. (TN Writing 2, 7, 8, 9)
- 2) Investigate and compare the range of skills, competencies, and professional traits required for careers in the therapeutic field. Compare findings to current individual strengths and identify opportunities for personal development. Translate real-time and projected labor market data into narratives to identify local and national employment opportunities and determine areas of growth within therapeutic health fields. (TN Reading 2, 7; TN Writing 4, 6, 8, 9)
- 3) Compare and contrast the specific laws and ethical issues that impact relationships among patients/clients and the healthcare professional (for example, patient confidentiality). Citing specific textual evidence to support analysis, debate these issues in an oral or written format. (TN Reading 1, 9; TN Writing 1, 4, 8, 9)
- 4) Demonstrate understanding of major legislation and policy affecting health care interaction and delivery by explaining to a patient/client or classmate the American Hospital Association's "Patient Bill of Rights"; National Patient Safety Goals; and Joint Commission on Accreditation of Health Organizations (JCAHO). (TN Reading 2)
- 5) Summarize the Health Insurance Portability and Accountability Act (HIPAA) and explain characteristics of advanced directives, living wills, durable power of attorney, and other legal directives governing medical treatment. Explain, using domain-specific language and accurate definitions of legal concepts, how the content of these legal documents impacts patients' rights for all aspects of care. (TN Reading 1, 2, 4, 5)
- 6) Construct an argumentative essay developing a claim about the impact of a specific piece of local, state or federal legislation (such as, but not limited to, bans on smoking, changes to entitlements, etc) on the health of Tennessee. Develop claim(s) and counterclaim(s) fairly, supplying data and evidence for reasoning, including an accurate summary of the legislation. (TN Reading 1, 2; TN Writing 1)
- 7) Summarize the economic impact of healthcare delivery on the national debt and develop a graph or other visual depicting findings, citing specific textual evidence. (TN Reading 1, 2, 7; TN Writing 4)

- 8) Calculate the costs of a range of health insurance plans, including deductibles, co-pays, PPO's and HMO's. Compare and contrast these plans with the provisions outlined in the Affordable Care Act. For a selected disease/disorder/injury, predict the total cost (including but not limited to the diagnostics, procedures, and medications involved) under each of these plans for the course of the treatment. (TN Reading 9)
- 9) Gather data related to a specific health issue in a local community (for example, dental health, mental/social health, and chronic health). Identify all healthcare professionals practicing in that community aligned to that specific health issue. Justify the need for an increase or decrease in the number of practicing healthcare professionals based on current data. (TN Writing 1, 7, 9)

Body Function and Structure

- 10) Outline the gross normal structure and function of all body systems, and summarize appropriate medical text(s) in order to list signs and symptoms of common diseases and disorders associated with each. (TN Reading 2; TN A&P 2, 3, 4, 5, 6)
 - a. Integumentary and lymphatic systems
 - b. Nervous and musculoskeletal systems
 - c. Cardiovascular and respiratory systems
 - d. Digestive and urinary systems
 - e. Reproductive and endocrine system

Infection Control/Medical Microbiology

- 11) Demonstrate concepts and skills of asepsis, Universal Precautions, sanitation, disinfection, and sterilization for patient/client care settings in adherence to standards and guidelines from the Center for Disease Control and Prevention (CDC) and the Occupational Safety and Health Administration (OSHA) in a lab/clinical setting. (TN Reading 3)
- 12) Define the term normal flora and explain how its deviation can prevent or cause a disease or disorder. Outline specific preventive measures to align to acceptable standards of care in the healthcare field. (TN Reading 4; TN Writing 4; TN A&P 5)
- 13) Compare and contrast healthcare-associated infections with non-healthcare-associated infections, citing relevant surveillance statistics, preventive measures, and methodologies concerning outbreak detection, management and education. (TN Reading 1; TN Writing 7)

Health Records

- 14) Research the documentation requirements and styles for at least two therapeutic careers. Demonstrate application of proper documentation techniques for a given patient assessment in each of the identified careers. (TN Reading 3; TN Writing 4, 7)
- 15) Define the terms Health Informatics, Health Information Technology, and Health Information Management. Compare and contrast the features and purposes of each in different healthcare settings (such as a physician's office, hospital, or emergency services site). (TN Reading 5)

- 16) Summarize information found in news media, professional journals, and trade magazines to examine how Telehealth has impacted the healthcare system and explain its benefits and challenges. (TN Reading 2)

Patient/Client Interaction

- 17) Evaluate factors that contribute to effective patient/client communication, demonstrating sensitivity to barriers, cultural differences, and special needs individuals. Use role-plays to demonstrate effective practices within a clinical or classroom setting. (TN Reading 3)
- 18) Accurately define and demonstrate an understanding of basic medical terminology in order to monitor patient/client status through assessment of:
- a. History and Physical (H&P) include but not limited to: family, environmental, social and mental history.
 - b. Head-to-toe assessment
 - c. Vital Signs assessment (VS)
 - d. Height/weight, BMI calculation
 - e. Dietary assessment
 - f. Dental Assessment
 - g. Visual examination
 - h. Evaluation of diagnostic test results
- (TN Reading 4, 5; TN A&P 1)
- 19) Develop a detailed treatment plan, incorporating accurate medical language, for a case study patient using applicable assessment information following an interview with patient or family member. (TN Reading 3, 4; TN Writing 4)
- 20) Develop a patient health education plan including preventive measures, signs and symptoms of exacerbation of disease/disorder/injury, pharmacological needs, and support systems. Include citations from at least three medical texts. (TN Reading 1, 3; TN Writing 2, 4, 7, 9)
- 21) Monitor, evaluate, reassess and report significant changes in a patient/client's physical, social, or mental status and relate findings to normal and abnormal anatomy and physiology using either a case study or family member. (TN Reading 9; TN Writing 9)
- 22) Construct a chart or graph to identify and document all healthcare professionals involved in the assessment, monitoring, treatment, and rehabilitation (if applicable) for the patient/client used in previous standards. (TN Writing 4)

Therapeutic Statistics

- 23) Synthesize charts, statistics, and other health-related data to understand the distribution and determinants of disease in target populations as related to therapeutic services (such as heart disease in women), and communicate this knowledge to the public through role-plays, written materials, or other informational resources to improve the health of the community. (TN Reading 2, 7; TN Writing 4, 7, 8, 9)

- 24) Evaluate research related to diseases, statistical information, and epidemiology to determine the unique needs of a target population as related to therapeutic services (such as cardiovascular rehabilitation services). Compare the incidence of a particular disease/disorder within this population to its prevalence on local, state, regional, and national levels. (TN Reading 2, 9)
- 25) Investigate the research and development of pharmaceutical agents, trends related to biotechnology and pharmaceuticals, immunizations, and pharmacogenomics. Conduct a long-term independent research project to craft an explanatory text narrating scientific procedures or technical processes (such as DNA-specific medications). Cite evidence from articles in scientific journals, defining the questions the author seeks to address. (TN Reading 1, 2, 6; TN Writing 2, 7, 8, 9)

Community Health

- 26) Successfully perform American Red Cross or American Heart Association adult, child, and infant Basic Life Support (BLS) cardiopulmonary resuscitation (CPR) for Healthcare Providers and First Aid skills. (TN Reading 3)
- 27) Research a local community emergency response team. Investigate therapeutic careers involved with emergency response; describe the education and training required for these healthcare professionals. (TN Reading 2)

Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 9-10 Students (page 62).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.
- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 9-10 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3, 5, and 10 at the conclusion of the course.
- TN A&P: Tennessee Science: [Anatomy and Physiology](#)
- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)
 - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.